IEEE 1904.1 *SIEPON* Working Group
Standard for Service Interoperability in Ethernet Passive Optical Networks

Source: **IEEE 1904.1 SIEPON Working Group**[1]

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Subject: ITU-T liaison letter dated 16 December 2011

Approved at IEEE 1904.1 Working Group meeting, Palo Alto, USA, 9 February 2012

Dear Mssrs. Effenberger and Kani,

Thank you for your kind letter dated 16 December 2011 describing your new draft Recommendation G.epon. Your letter and the attached draft were discussed during our most recent meeting and we would like to offer some comments on this project.

[1] This document solely represents the views of the IEEE 1904.1 Working Group, and does not necessarily represent a position of the IEEE, the IEEE Standards Association, or IEEE Communications Society.

I will begin by reviewing the history of our correspondence and collaboration on the topic of developing an OMCI-based management solution for IEEE EPON. The purpose of this review is to recognize the constructive and substantive collaboration between our groups to date, and to reaffirm the desire of the P1904.1 WG to maintain the close alignment of our work programs. As the result of an exchange of liaison letters in the first half of 2010 between ITU-T SG15/Q2 and P1904.1 on the topic of potential limitations of the Slow Protocol Frame Rate, the P1904.1 WG sent a liaison letter to the IEEE 802.3 WG, requesting modification of the 10 frames-per-second limit. As you know, this request was addressed promptly by the IEEE 802.3 WG and resolved in a manner that satisfied all parties. Shortly thereafter, a discussion on the best path forward for developing an OMCI-based management solution for IEEE EPON was held during the October 2010 SIEPON meeting in Tokyo. It is highly relevant that this discussion included both EPON experts from the SIEPON community and OMCI experts with a long record of participation in the work of ITU-T SG15/Q2 and with an active interest in advancing the proposed work. The result of this discussion was a mutual understanding that the most appropriate course for the ITU-T SG15/Q2 was the development of a new, OMCI-based, management solution restricted to the existing, complete set of features and their behaviors as defined in Package B of the SIEPON standard. This resolution was described in a liaison letter from our group to yours, dated 27 October 2010. A copy is attached to the present letter for your convenience. Until the arrival of your most recent letter, and in the absence of any other indication of a change of plans, we had assumed that the program outlined in our 27 October 2010 letter described the direction of the ITU-T SG15/Q2 in its development of an OMCI-based management solution for IEEE EPON.

In reviewing the G.epon draft forwarded with your letter we identified a number of concerns regarding its scope and contents. Instead of a solution limited to the features and their behaviors contained by Package B of the SIEPON specification, G.epon contains substantive deviations from and modifications of Package B features. Following are a few examples:

- Section 6.4 of the G.epon draft describes power-saving and energy-efficiency requirements for ONUs. The requirements and mechanisms specified for these features in G.epon are in conflict with these features in SIEPON Package B. As a consequence, devices built to comply with the SIEPON specification might not meet the G.epon requirements;

- The timing and delay requirements described in Sections 7.5 and 7.3 of the G.epon draft conflict with the timing and delay requirements of SIEPON Package B, and indeed conflict with all of the SIEPON Packages and possibly with IEEE 802.3 as well. As a consequence, devices built to comply with the SIEPON specification might not meet the G.epon requirements;

- The DBA requirements described in Section 8.2.3 of the G.epon draft represent a substantive deviation from QoS mechanisms and behaviors defined in SIEPON Package B. As a consequence, devices built to comply with the G.epon specification might not support the service models and requirements specified in SIEPON Package B;

- The VLAN modes listed in Section 7.6 of the G.epon draft appear to conflict with the larger and broader set of VLAN requirements in SIEPON Package B. As a consequence, devices built to comply with the G.epon specification might not satisfy the requirements and behaviors specified in SIEPON Package B.

The foregoing list is not exhaustive but is sufficient to illustrate the degree of variance between the G.epon draft and SIEPON Package B. It is quite possible that the authors of the present G.epon draft did not have access to an up-to-date version of the SIEPON Package B draft at the time of their writing, and if this is the case, that would account for much of the problem. To rectify this issue, and in response to your present request, attached to this letter please find a copy of the most recent version of the SIEPON draft (D2.3). We urge ITU-T SG15/Q2 to review this document and strictly align G.epon to SIEPON Package B. Of course, if during your review you identify any errors or deficiencies in the SIEPON draft, please communicate these findings so that we may improve our standard.

The negative consequences of not aligning the two standards are obvious: equipment and component suppliers would bear the burden of developing and supporting two solutions; the market likely would fragment, thus slowing the pace of innovation and raising costs; and the valuable time of the members of the ITU-T SG15/Q2 and the IEEE P1904.1 WG would be wasted needlessly on the task of developing and maintaining two very similar yet incompatible standards. I am confident that everyone in our two groups understands the undesirability of this outcome and will work in good faith to prevent it.

I also would like to inform you that the P1904.1 WG is entering a new phase of its work program, namely the development of conformance test suites and a compliance-certification program for SIEPON-based equipment. This effort represents a collaborative effort involving the P1904.1 WG, the IEEE Conformity Assessment Program (ICAP), participating ICAP Authorized Laboratories, and the community of network operators, equipment vendors and component suppliers interested in SIEPON.

Our document is nearly complete and will enter the Sponsor Ballot process soon, which is the final phase of our standards development process. We share your desire to

harmonize G.epon and SIEPON package B. We place a high value on a sustained and substantive liaison between our groups, which we feel is vital in maintaining a close alignment between our work programs. Accordingly, we will endeavor to forward new versions of our draft document on a regular basis, and we ask that ITU-T SG15/Q2 keep the P1904.1 WG informed of any new and relevant developments as your work progresses.

Very truly yours,

Glen Kramer, Chair, IEEE 1904.1 *SIEPON* Working Group (glen.kramer@ieee.org)

Upcoming P1904.1 Meetings
17-19 April 2012, Prague, Czech Republic
June 2012 (dates TBD), Louisville Colorado, USA

Attachments

1. Liaison Statement from IEEE P1904.1 to ITU-T SG15 titled “OMCI for EPON Systems” dated 27 October 2010.

2. IEEE P1904.1™/D2.3 -- Draft Standard for Service Interoperability in Ethernet Passive Optical Networks (SIEPON)